

What is claimed is:

1. A storage device comprising:

a first storage unit that comprises a non-volatile storage area made of a plurality of blocks each made of a plurality of memory pages each including a data area for storing data and a redundant area storing a data identification flag indicating whether or not the data stored in said data area is structural data configuring a target program to be executed, and that is accessed in a sequential manner by a unit of said memory page;

a second storage unit that comprises a non-volatile storage area and that stores a reading program for reading said target program from said first storage unit;

a third storage unit that comprises a volatile storage area accessed randomly and that stores said target program read from said first storage unit; and

a control unit that specifies a memory page storing said structural data by using said data identification flag stored in said redundant area of said first storage unit and reads said structural data from said data area of said specified memory page according to said reading program stored in said second storage unit, stores said target program configured by said read structural data in said third storage unit, and executes said target program stored in said third storage unit.

2. The storage device according to claim 1, wherein said reading program includes a program that causes said control unit to specify a memory page that stores said structural data from said plurality of memory pages.

3. The storage device according to claim 2, wherein said first storage unit is formed of NAND type flash memory.

4. The storage device according to claim 2, wherein said reading program includes a program that causes said control unit to detect said data identification flag stored in each of said plurality memory pages and to specify a memory page that stores said structural data using said data identification flag.

5. The storage device according to claim 3, wherein  
said target program is a device driver that makes it possible for said control unit to gain access to the first storage unit randomly in a smaller unit than said memory page unit in a quasi manner; and  
5 said control unit executes said device driver stored in said third storage unit to gain access to said first storage unit randomly in a smaller unit than said memory page unit in a quasi manner.
6. The storage device according to claim 4, wherein  
said target program is a device driver that makes it possible for said control  
10 unit to gain access to the first storage unit randomly in a smaller unit than said memory page unit in a quasi manner; and  
said control unit executes said device driver stored in said third storage unit to gain access to said first storage unit randomly in a smaller unit than said memory page unit in a quasi manner.
- 15 7. The storage device according to claim 5, wherein  
each of said plurality of memory pages is assigned a logical address for specifying the memory page; and  
said device driver includes a program that causes said control unit to obtain a logical address for specifying a memory page to be accessed and to gain access to the memory  
20 page to which the same logical address as said obtained logical address is assigned.
8. The storage device according to claim 6, wherein  
each of said plurality of memory pages is assigned a logical address for specifying the memory page; and  
said device driver includes a program that causes said control unit to obtain a logical  
25 address for specifying a memory page to be accessed and to gain access to the memory page to which the same logical address as said obtained logical address is assigned.
9. The storage device according to claim 1, wherein

said second storage unit obtains said read program supplied externally and stores said obtained reading program.

10. A storage device controlling method comprising the steps of:

specifying a memory page that stores structural data configuring a target  
5 program to be executed, from a first storage unit which comprises a non-volatile storage area made of a plurality of blocks each made of a plurality of memory pages each including a data area for storing data and a redundant area for storing a data identification flag indicating whether or not the data stored in said data area is said structural data and which is accessed in a sequential manner in a unit of each said  
10 memory page, by using said data identification flag stored in said redundant area according to a reading program for reading said target program;

reading said structural data from said data area of said specified memory page according to said reading program;

storing said target program configured by said read structural data to a third  
15 storage unit that comprises a volatile storage area and can be accessed randomly; and  
executing said target program stored in said third storage unit.

11. A program for controlling a computer comprising:

a first storage unit that comprises a non-volatile storage unit made of a plurality of blocks each made of a plurality of memory pages each including a data  
20 area for storing data and a redundant area for storing data identification flag indicating whether or not the data stored in said data area is structural data configuring a target program to be executed, and that is accessed in a sequential manner by a unit of said memory page;

a second storage unit that comprises a non-volatile storage area and that  
25 stores a reading program for reading said target program from said first storage unit;  
and

a third storage unit that comprises a volatile storage area accessed randomly

and that stores said target program read from said first storage unit,

and said program causing said computer to specify a memory page storing said structural data by using said data identification flag stored in said redundant area of said first storage unit and read said structural data from said data area of said 5 specified memory page according to said reading program stored in said second storage unit, store said target program configured by said read structural data in said third storage unit, and execute said target program stored in said third storage unit.